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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,584	04/25/2006	Nobuaki Katayama	282055US0X PCT	3251
22850	7590	04/02/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER BOYKIN, TERRESSA M	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			04/02/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/563,584	<b>Applicant(s)</b> KATAYAMA ET AL.	
	<b>Examiner</b> Terressa M. Boykin	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4-10-06; 1-6-06</u>   | 6) <input type="checkbox"/> Other: _____                          |

**\* Note that all responses to this action should be sent to Art Unit 1711.**

**Priority**

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

**35 USC 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001-329016 see abstract, claims further in view of JP 62-97601 note abstract and JP (translations provided by applicants in IDS 4-10-06).**

**JP 2001 329016** discloses a method for manufacturing a cyclic olefin polymer showing heat resistance and lowering of the molecular weight and having

little residual solvent. The cyclic olefin polymer composition comprises a cyclic olefin polymer and an organic solvent is subjected to (1) heating with agitation and not more than the boiling point of the composition under normal pressure, and then to heating under reduced pressures with continued agitation in a stepwise manner of (2) at  $\geq 80^{\circ}\text{C}$  and  $\leq 255^{\circ}\text{C}$  under a pressure of  $\geq 4$  kPa and  $\leq 70$  kPa and (3) at  $\geq 190^{\circ}\text{C}$  and  $\leq 255^{\circ}\text{C}$  under a pressure of  $\geq 1$  kPa and  $< 4$  kPa. The organic solvent in the composition is thus eliminated and the polymer showing little degradation of heat resistance and lowering of the molecular weight and having little residual organic solvent can be obtained.

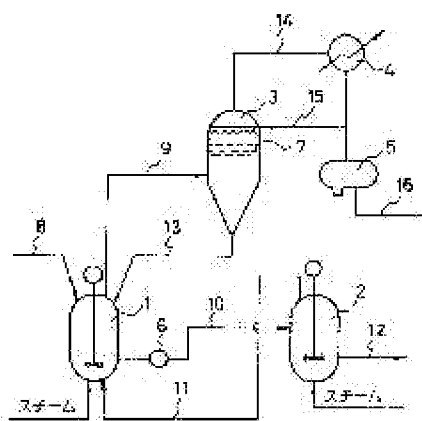
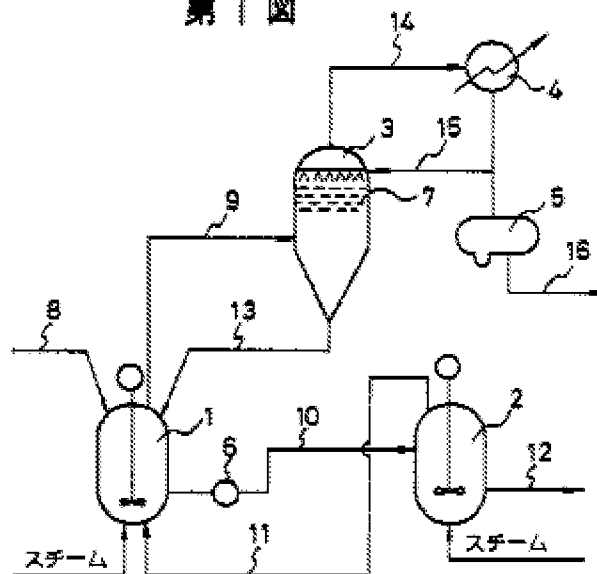
With regard to claims 4 note that the reference discloses that aliphatic hydrocarbon of the carbon numbers 5-14, such as hexane, heptane, octane, dodecane, cyclohexane, cycloheptane, a cyclodecane, and a methylcyclohexane, is suitably used for an inert solvent, and cyclohexane and a methylcyclohexane are most suitable.

With regard to applicants claim 5 note that the reference discloses that a cyclic olefin system polymer used after carrying out ring opening polymerization of the cyclic olefin etc. according to a metathesis catalyst, with the hydrogenation ring-opening-polymerization object, Ziegler-Natta catalyst, or the metallocene catalyst which hydrogenated the unsaturated double bond produced in a polymer. After carrying out copolymerization of alpha olefin, cyclic olefin, etc., such as ethylene or propylene, without carrying out ring breakage of the cyclic olefin etc., It is divided roughly, without the hydrogenation styrene system polymer and hydrogenation styrene system copolymer which hydrogenated the unsaturated double bond containing the aromatic

series of the added type copolymer which hydrogenated the unsaturated double bond if needed, the polymer which uses polystyrene as the main ingredients, or a copolymer.

With regard to claim 11, 15, and 22 note that the organic solvent is an organic solvent used in the synthetic process of the above may be heptane, octane, a dodecane, cyclohexane, cycloheptane, Aliphatic hydrocarbon of the carbon numbers 5-14, such as a cyclodecane and a methylcyclohexane; Benzene, Aromatic hydrocarbon of the carbon numbers 6-14 of toluene, xylene, ethylbenzene, etc.; Methanol, They may be oxygenated aliphatic hydrocarbon of the carbon numbers 1-10 of ethanol, diethyl ether, methyl tertiary butyl ether, a tetrahydrofuran, a franc, Piran, etc., and these arbitrary mixtures. Toluene, cyclohexane, a methylcyclohexane, and methyl tertiary butyl ether are preferably mentioned also in them.

**JP 62-097601** discloses a process for recovering solvents by steam stripping to which has enormous energy saving capability. The process is performed by blowing effluent gas from the subsequent stage into the preceding stage to recover the effluent gas of the initial gas by cooling when solvent is recovered from slurry containing polymers by a multistage countercurrent stripping using a tank.



The features as calimed with regard to the upward and downward stream are noted in the figure above whihc contains a pipeline.

Specifically, slurry is fed through a pipe 8 into a tank 1 where steam is blown into. Solvent is purged through a pipe 9 to a plate column 3 and further condensed in a condenser 4 to be recovered, while the recovered solvent is received by a receiver 5. Part of the recovered solvent is returned through a pipe 15 to the plate column 3, contacted with effluent gas from the tank 1, where impurities and water in the effluent gas are removed, and returned to the tank 1 through a pipe 13. Slurry in the tank 1 is withdrawn by a pump 6 and sent to a tank 2 through a pipe 10, where steam is blown into to keep said tank 2 at a temperature higher than that of the tank 1, while the solvent is returned to the tank 1 through a pipe 11.

Thus, the reference discloses a method for making an olefin having little to no solvent in the end product prepared from the same components as claimed by applicants except for the particular parameter, i.e. difference in pressures as claimed

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$(\Delta P_0 = P_{20} - P_{10})$  , and/or the particular temperature range. as claimed using an apparatus for steam stripping. The reference does disclose a *temperature range* of  $\geq 80$  degrees C  $^{\circ}$   $\leq 255$  degrees C  $^{\circ}$  under a *reduced pressure* of  $\geq 4$  kPa and  $\leq 70$  kPa and  $\geq 190$  degree C  $^{\circ}$  and  $\leq 255$  degrees C  $^{\circ}$  under a pressure  $\geq 1$  kPa and  $\leq 4$  kPa. Further, JP 62-097601 discloses the particular apparatus employing an upward and downward stream and a pipeline as claimed.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ particular parameters, as known in the art, since it is well-established that merely selecting proportions and ranges is not patentable absent a showing of criticality. In re Becket, 33 U.S.P.Q. 33 (C.C.P.A. 1937). In re Russell, 439 F.2d 1228, 169 U.S.P.Q. 426 (C.C.P.A. 1971). Generally, it is prima facie obvious to determine workable or optimal values within a prior art disclosure through the application of routine experimentation. See In re Aller, 105 USPQ 233, 235 (CCPA 1955); In re Boesch, 205 USPQ 215 (CCPA 1980); and In re Peterson, 315 F.3d 1325 (CA Fed 2003). Further, it would have been obvious further in view of JP 62-097601 the use of the apparatus for steam stripping a solvent is disclosed.

Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

### **35 U.S.C. 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A single claim which recites both an apparatus and the method steps of using the apparatus is indefinite under 35 USC 112, second paragraph. See Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990). Such claims should also be rejected under 35 USC 101 on the theory that the claim is directed to neither a “process” nor a “machine”, but rather embraces or overlaps two different statutory categories of invention set forth under that statute, which is drafted so as to set forth the statutory classes of invention in the alternative only. Id. At 1551.

### **Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terressa M. Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday-Thursday 10-5:30 Friday (work at home).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, James Seidleck can be reached on 571 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Terressa M. Boykin/  
Primary Examiner, Art Unit 1796